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Docket No.: 29020/96007B2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Hoerner et al.

Application No.: 09/249,916 Group Art Unit: 3634

Filed: February 12, 1999 Examiner: Lev, B.

For: COUPLING MECHANISM AND PANEL FOR SECTIONAL DOOR

BRIEF ON APPEAL

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to the Notice of Appeal mailed May 28, 2002 in connection with the above-identified patent application, as well as the enclosed petition for revival of an unintentionally abandoned application, the Applicants respectfully submit the following Appeal Brief in accordance with 37 C.F.R. § 1.192.

I. REAL PARTY IN INTEREST

The real party in interest is Rite-Hite Holding Corporation, by virtue of an assignment recorded with the U. S. Patent & Trademark Office at Reel 10767, Frame 0465.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants, Appellant's legal representative, or Assignee which will directly affect or be directly affected by, or have a bearing on, the Board's decision, in the pending appeal.

III. STATUS OF CLAIMS

Claims 17-20 are currently pending, with the rejection thereof being hereby appealed.

IV. STATUS OF AMENDMENTS

There are no outstanding or unentered amendments in the pending application.

V. SUMMARY OF THE INVENTION

The present invention is generally related to overhead doors such as those used on garages and the like, and more particularly relates to the construction and method of manufacture of panels and hinges for such doors. (Specification, page 2, lines 2-3).

With such doors, a plurality of horizontally disposed panels are typically hinged together to enable the door to be positioned in any one of numerous positions between a fully closed vertical position and a fully opened horizontal position. The plurality of panels are hinged together so as to enable them to pivot and move apart as the door traverses between vertical and horizontal positions. (Specification, page 2, lines 5-20).

While effective, the hinges of such prior art doors do have a number of attendant drawbacks. For example, the hinges necessarily produce an air space between adjacent panels thereby allowing for fluid flow therethrough. This is a particularly detrimental feature when the enclosure being closed by the overhead door is to be refrigerated or otherwise temperature controlled. Moreover, the spaces or gaps between successive panels can in turn create pinch points as the door is opened and closed, thereby creating a hazard either to people or cargo in the vicinity of the door. In addition, as such doors are often used in industrial environments, it is not

uncommon for the doors to be subjected to substantial impacts, potentially damaging the hinges and requiring repair or replacement. (Specification, page 3, lines 2-18).

In order to overcome such negative features of the prior art, the present invention sets forth a number of innovative concepts. For example, each of the panels is connected by a pliable hinge member 35 having expanded, opposed ends 37 and 38. As clearly visible in a comparison between Figs. 4 and 5, the pliable hinge member 35 is freely moveable between adjacent panels 12a and 12b. Accordingly, when the door is moved into a downward or closed position, the weight of the upper panels 12a causes the upper panels 12a to rest on top of, and push down on, lower panels 12b, thereby giving the door rigidity. Since the pliable member 35, is freely movable, the panels are able to compress together in such a manner. Moreover, using spacer blocks 50, a minimum spacing is maintained between panels 12, thereby avoiding the aforementioned pinching hazard. (Specification, page 8, line 13 through page 9, line 12).

With respect to each of the panels 12, they are also innovatively constructed. As indicated in Fig. 7, each panel 12 includes upper and lower extrusions 41 connected by at least one weldment 60. Blocks of material having a polystyrene core 61 sandwiched between polyethylene skin panels 62, 63 are then inserted into the frame with endcaps 64 securing them to the panel 12. Since the cores 61 are loosely held within the panel 12, this allows for relative movement between the layers, greatly increasing the performance of the panel in variable temperature conditions. For example, due to the polystyrene core and polyethylene skin having different coefficients of thermal expansion, as the door is subjected to different ambient temperatures, the layers will expand at different rates. If the panels were to be securely fixed to the frame, such expansion would cause rupture of the panels, or deformation of the frame thus decreasing the effectiveness of the door. However, by loosely mounting the panels within the

frame, such expansion is allowed and the integrity of the frame is maintained. (Specification, page 10, line 4 through page 11, line 11).

Accordingly, Claim 17, and dependent Claims 18 and 19 specify, *inter alia*, a panel for a sectional door having a plurality of material layers received within a central area of a frame, with the layers being moveable relative to each other. Claim 20 is a method claim of similar construct including a step of inserting layers of material into a central area of a frame to provide relative movement therebetween.

VI. ISSUES

(a) Whether claims 17 and 20 are anticipated by Shaner et al., U.S. Patent No. 5,445,208 under 35 U.S.C. §102(b).

(b) Whether claims 18 and 19 are unpatentable under 35 U.S.C. §103(a) as being obvious over Shaner, U.S. Patent No. 5,445,208, in view of Albrecht, U.S. Patent No. 5,848,508.

VII. GROUPINGS OF CLAIMS

For purposes of this Appeal, all pending claims 17-20 stand or fall together as a group. Appellants reserve the right, however, to present arguments advancing the patentability of the various dependent claims, or other claims supported by the present specification, in further prosecution.

VIII. ARGUMENT

(a) Claims 17 and 20 are not anticipated by Shaner et al., U.S. Patent No. 5,445,208 under 35 U.S.C. §102(b).

Claim 17 specifies, *inter alia*, a panel for a sectional door having a plurality of material layers received within a central area of the door frame and movable relative to each

other. Similarly, claim 20 specifies, *inter alia*, a method for forming a sectional door panel comprising inserting layers of material into a central area of a frame and providing relative movement between the layers.

Shaner et al. fails to disclose such elements and therefore cannot anticipate the pending claims[1]. Shaner discloses a garage door 10 having a plurality of door panels 12 hinged together in a conventional manner. Each panel 12, as depicted best in its figure 6, includes a rear sheet member 104 manufactured from fiberglass (see column 8, line 66-68), a front sheet 102 manufactured from polyvinylchloride (see column 9, line 16-17), and a rigid core 112 manufactured of polyurethane foam comprising isocyanate and polyol reactive material. (See column 10, lines 7-11). As stated throughout the specification, the foam core 112 is formed *in situ* and bonds to both the front sheet 102 and the rear sheet 104 to provide structural rigidity in each panel section 110 (see, e.g., column 10, lines 13-16, column 4, lines 25-31, column 4, lines 65-68).

Since the layers of the Shaner et al. door are bonded together, it cannot fairly be said that Shaner discloses a sectional door panel having a plurality of material layers which are

[1] "Anticipation under 35 U.S.C. § 102 requires the disclosure in a single piece of prior art of each and every element of a claimed invention." *Rockwell International Corp. v. United States*, 47 USPQ2d 1027 (Fed. Cir. 1998).

movable relative to each other. As such elements are set forth in each of the rejected claims, the appellants respectfully submit that the anticipation rejection should be overturned.[2]

(b) Claims 18 and 19 are not unpatentable under 35 U.S.C. §103(a) as being obvious over Shaner et al., U.S. Patent No. 5,445,208, in view of Albrecht, U.S. Patent No. 5,848,508.

Claims 18 and 19 depend from independent claim 17, which, as indicated above, specifies, *inter alia*, a panel for a sectional door having a plurality of material layers which are movable relative to each other.

As indicated above, such elements are not disclosed by Shaner et al. The appellants further submit that such elements are not disclosed or suggested by the additional reference Albrecht, U.S. Patent No. 5,848,508.

Albrecht discloses a patio wall 10 having a core 18 sandwiched between an exterior panel 20 and an interior surface 22. (See column 2, lines 30-32). The core 18 includes a first layer 24 of polyisocyanurate material bonded to a second layer 26 of plasterboard. The layers 24 and 26 are bonded by an adhesive substance such as a water based glue. (Specification, column 2, lines 33-36). The exterior panel 20 is formed of an exterior grade hard

[2] Notwithstanding the above, the appellants also wish to point out the inconsistent nature of the anticipation rejections set forth during the prosecution of the present case. In a first office action, claims 17 and 20 were rejected as anticipated by the above-referenced Shaner at al. reference. The claims at that time already specified that the layers of the door were moveable relative to one another. In response to the first office action, claims 17 and 20 were not amended, but the appellants submitted arguments indicated this shortcoming in Shaner, et al. The examiner then issued a second office action, withdrawing Shaner et al. as an anticipatory reference, and citing Albrecht, U.S. Patent No. 5,848,508 as anticipating the claimed subject matter. In response to the second office action, the appellants amended claims 17 and 20 to specify that the claimed panels were hinged together. Surprisingly, however, in response to this arguably narrowing amendment, the examiner then withdrew the Albrecht reference, and again reasserted Shaner, et al. as anticipatory. For the examiner to withdraw the Shaner et al. reference with respect to broader claims, and then reassert the same reference after the claims have been narrowed is inconsistent and further evidence of the weakness of the rejection.

board paneling, while the interior surface 22 is comprised of a coating such a spackle or paint. (Specification, column 2, lines 43-45).

Again, the appellants fail to see how Albrecht sets forth the elements already shown to be lacking from Shaner et al. As specifically stated in column 2, line 35, layers 24 and 26 are bonded together by an adhesive. Such layers can therefore not fairly be characterized as being movable relative to each other as required by the pending claims. Moreover, as the interior surface 22 is a coating such as spackle or paint, it by definition must be bonded to the plasterboard 26. The interior surface 22 is therefore also not movable relative to the plasterboard 26.

For the establishment of any *prima facie* case of obviousness, three criteria must be met according to MPEP § 2143:

> "First, there must be some suggestion or motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, a prior art reference (or references when combined) must teach or suggest all the claim limitations".

It is primarily with respect to the third requirement that the rejection set forth by the Examiner falls short. As indicated above, neither the Shaner et al. nor Albrecht references disclose a frame having a plurality of layers which are movable relative to each other. Albrecht is even further removed in that it is not even related to a sectional door panel, but rather to a patio wall. Accordingly, even if one of ordinary skill in the art were to have the extraordinary insight to combine the Shaner et al. and Albrect references, the subject matter of the pending claims would not result.

However, not only is this third requirement of § 2143 not satisfied, but the first requirement is equally lacking. As stated above, some suggestion or motivation must be provided by the combined references to arrive at the pending subject matter.[3] Here, no suggestion or motivation is provided. In order for such a suggestion to be provided, the references must first identify the problem solved by the subject matter of the pending claims. In this instance, the identified problem relates to structural deficiencies in garage doors having panels formed of multiple components riveted or otherwise fastened together, and securely fastened to a frame of the door. (Specification, page 10, lines 9-15). As such doors are typically subjected to relatively extreme temperature ranges, and the materials themselves have different coefficients of thermal expansion, the materials forming the layers expand and contract at different rates as the door is subjected to temperature changes. This places stress on the rivets or other fasteners, deforms the door, and generally affects performance and/or appearance in a detrimental fashion.

Both Shaner et al. and Albrecht are silent in this regard. This is certainly not surprising with respect to Albrecht in that it is not even related to a garage door. Its "performance" cannot therefore be detrimentally affected in that it does not need to transverse overhead rails wherein the maintenance of dimensions is important for proper operation. Only Shaner et al. is even related to garage doors, and it is completely silent with respect to any problems encountered due to differences in thermal expansion rates of the various materials forming the panels. This is clearly evident by the fact that the components forming the panel of

[3] "For a claim to be invalid for obviousness over a combination of references, there must have been a motivation to combine the prior art references to produce the claimed invention." *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*, 46 USPQ2d (Fed. Cir. 1998); "In reviewing the Board's obviousness conclusions, we have been guided by the well-settled principles that the claimed invention must be considered as a whole, multiple prior art references must suggest the desirability of being combined, and the references must be viewed without the benefit of hindsight afforded by the disclosure." *In re Paulsen*, 31 USPQ2d 1671 (Fed. Cir. 1994).

Shaner et al. are securely bonded together. Accordingly, if the door of Shaner et al. were to be subjected to a relatively extreme temperature range, the different materials forming the door would expand at different rates, and the bonds therebetween would be put under extreme stress, thus causing the door itself to deform. This can, among other things, detrimentally affect performance in that the door may expand or bow to an extent hindering or preventing the raising or lowering of the door on the rails of the overhead rail structure.

In light of the forgoing, the appellants respectfully submit that the obviousness rejection set forth by the Examiner is misplaced and should be overruled as well.

IX. APPENDIX

An Appendix containing a copy of the claims involved in this Appeal is attached hereto.

March 4, 2003

Respectfully submitted,

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APPENDIX

17. A panel for a sectional door, comprising in combination:

a frame defining at least one central area, the frame including a horizontal member adapted to be coupled to a hinge member for hingedly connecting the panel to another sectional door panel; and

a plurality of material layers received within the central area of the frame and held in place by the frame, the layers being movable relative to each other.

18. A panel according to claim 17, wherein the frame comprises first and second aluminum extrusions, joined together by at least one weldment.

19. A panel according to claim 18, wherein the layers comprise a polystyrene core sandwiched between polyethylene skin layers.

20. A method for forming a sectional door panel comprising:

providing a frame defining at least one central area;

inserting layers of material into the central area to be held by the frame, and to provide relative movement between the layers; and

coupling a hinge member to the frame to allow the panel to be hinged to another sectional door panel.